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**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

*Order Instituting Rulemaking Regarding  
Broadband Infrastructure Deployment and  
to Support Service Providers in the State  
of California.*

Rulemaking 20-09-001  
(Filed September 10, 2020)

**OPENING COMMENTS OF THE YUOK TRIBE  
ON THE ASSIGNED COMMISSIONER'S  
SECOND AMENDED SCOPING MEMO AND RULING**

Kori Cordero  
Associate General Counsel  
Yurok Tribe  
PO BOX 1027  
Klamath, CA 95548  
Tel: (707) 482-1350  
E-mail: [kcordero@yuroktribe.nsn.us](mailto:kcordero@yuroktribe.nsn.us)

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*Attorney for the Yurok Tribe*

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**I. Introduction**

Pursuant to the Administrative Law Judge's Ruling issued on August 20, 2021, and the August 2, 2021 Assigned Commissioner's Second Amended Scoping Memo and Ruling, the Yurok Tribe submits these opening comments.

The Yurok Tribe is a sovereign nation and federally recognized tribe, the largest within California with over 6,300 enrolled members. The Yurok Tribe's government is made up of many different departments, committees, and programs that implement and enforce Yurok law, manage the day-to-day operations of the government, and interact with state, local, and federal governments and entities on behalf of Yurok tribal members.

The Yurok Tribe also has various wholly owned Yurok corporations, utility districts, and other public and private entities that serve as arms of the Yurok tribal government. The Tribal government, its corporations, utility districts, and other tribal entities combined are one of the largest employers in the area and provide a wide variety of services to both Indian and non-

Indian community members, including, but not limited to, health and human services, emergency services, legal, environmental and natural resource management, internet, and education.

The Yurok Reservation (“Reservation”) is home to Yurok tribal members, other tribal members, and non-Indians. The Reservation spans approximately forty-five (45) miles from the Pacific Ocean along both sides of the Klamath River to the convergence of the Klamath River and Trinity River near Weitchpec. The Yurok ancestral territory is substantial and includes large portions of California’s Del Norte and Humboldt counties. The Yurok Tribe operates Yurok Connect, a Wireless Internet Service Provider (“WISP”), that provides broadband services to Reservation residents within Del Norte and Humboldt counties.<sup>1</sup> The Yurok Tribe also wholly owns the Yurok Telecommunications Corporation.

## **II. Public Comment Issue 1: Existing Middle Mile Infrastructure**

### **1(a) What routes, if any, should be modified, removed from consideration, or revised?**

#### **Provide an explanation for these suggestions.**

The Yurok Tribe has evaluated the Anchor Build Fiber Highways Map.<sup>2</sup> We are pleased to see the inclusion of a route along U.S. Route 101 (“Highway 101”) within Humboldt and Del Norte counties (and beyond), including a portion to and through Yurok Ancestral Territory. We strongly support the inclusion of this route along Highway 101 in Northern California and believe it will be a crucial cornerstone for accessible, affordable broadband in the North Coast of California. This route would enable last mile connections to Reservation residences unserved by

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<sup>1</sup> “The Ancestral Lands of the Yurok Tribe extend unbroken along the Pacific Ocean coast (including usual and customary offshore fishing areas) from Damnation Creek, its northern boundary, to the southern boundary of the Little River drainage basin, and unbroken along the Klamath River, including both sides and its bed, from its mouth upstream to and including the Bluff Creek drainage basin. Included within these lands are the drainage basin of Wilson Creek, the drainage basins of all streams entering the Klamath River from its mouth upstream to and including the Bluff Creek and Slate Creek drainage basins, including the village site at Big Bar (except for the drainage basin upstream from the junction of Pine Creek and Snow Camp Creek), and the Canyon Creek (also known as Tank Creek) drainage basin of the Trinity River, the drainage basins of streams entering the ocean or lagoons between the Klamath River and Little River (except for the portion of the Redwood Creek drainage basin beyond the McArthur Creek drainage basin, and except for the portion of the Little River drainage basin which lies six miles up from the ocean). Our Ancestral Lands include all submerged lands, and the beds, banks and waters of all the tributaries within the territory just described. Also included within the Ancestral Lands is a shared interest with other tribes in ceremonial high country sites and trails as known by the Tribe, as well as the Tribe’s usual and customary hunting, fishing and gathering sites. The Ancestral Lands are depicted on the “Map of Yurok Ancestral Lands,” on file in the Yurok Tribal Offices.” Article 1, Section 1. Yurok Constitution.

<sup>2</sup> <https://arccg.is/1G9CTL>

25/3 Mbps. However, we have identified other key routes within the Yurok Ancestral Lands that have been overlooked and unless rectified will once again exclude and isolate the Yurok Tribe, its members, and Reservation, furthering the digital divide. The Yurok Tribe recommends the following additions to the Commission's proposed middle-mile fiber routes:

*Proposed Route 1: Orick to Weitchpec, CA.* The Yurok Tribe strongly recommends the proposed middle-mile locations are updated to include a middle-mile route from the proposed Highway 101 routes in Orick, CA to Weitchpec, CA along the Bald Hills Road to CA-169. This route will enable the Yurok Tribe to provide last-mile service to unserved households in the upriver portion of the Reservation, including the Yurok Tribe's secondary government headquarters, emergency service operations, and the only upriver market on the Reservation, in Weitchpec. Wildfires have increased in frequency and severity in the past several years, and climate scientists have predicted this trend will only get worse in the coming years and be exacerbated by drought conditions. So, underground fiber will be crucial to withstand increased wildfires in the area and to maintain connectivity on the Reservation. Further, it is our understanding that Caltrans already has road construction work scheduled to occur along that route. This route would enable last mile connections to residences unserved by 25/3 Mbps.

*Proposed Route 2: Weitchpec, CA to Johnson, CA.* The Yurok Tribe further recommends extending Proposed Route 1 above, along CA-169, from Weitchpec to the end of CA-169 in Johnson, CA (also known as the Wautek Village). As mentioned previously, underground fiber along the CA-169 will increase infrastructure resiliency that can better survive increasingly dangerous wildfires. This route would enable last mile connections to residences unserved by 25/3 Mbps.

*Proposed Route 3: Willow Creek, CA to Weitchpec, CA.* The Yurok Tribe supports the proposed CA-299 middle-mile fiber route from Arcata, CA eastward to Redding (and beyond). Further, we recommend an additional route—extending from the from the CA-299 route in Willow Creek, CA north along the CA-96 to Weitchpec, CA. Assuming the Yurok Tribe's proposed routes are implemented, a Willow Creek to Weitchpec route will create crucial redundancies. Further, the Yurok Tribe has tribal members and employees that reside on the Hoopa Valley Reservation—which is unserved and without fiber access. This route would enable last mile connections to residences unserved by 25/3 Mbps.

The Yurok Tribe strongly recommends the Commission add all three proposed routes. As presently proposed, the middle-mile network leaves a large blank space on the map in our region. This gap is approximately 4,700 square miles, roughly the same size as the state of Connecticut. While this area is rural and does not have the population size of Connecticut, we respectfully remind the Commission that this is not blank space. This area includes the Yurok Reservation, Yurok Ancestral Lands and the reservation lands of approximately five other federally-recognized tribes. Upon signing SB 156, Governor Gavin Newsom announced that the funding was a “critically important step to ensuring that California’s economic recovery will leave no part of our state behind.”<sup>3</sup> Without including the Yurok Tribe’s proposed routes, this part of the state will be left behind. The Commission must prioritize an affordable, open access middle-mile network that can serve as a first step to closing the digital divide that exists for tribes in our region.

One route along the US-101 is not sufficient to meet the needs of this area, there should a grid approach to the middle-mile network in this rural region, especially because it’s rural. The rural nature of the region has been used to justify lack of infrastructure buildouts by private entities. While some public funding has been proposed for projects in the area before, many of these proposed projects and/or funding opportunities—for example, RDOF on the Yurok Reservation—have not resulted in actual infrastructure. Other proposed projects that rely on pole attachments (if ever completed) may not be climate resilient in a region plagued by wildfire. Underground middle-mile fiber along the roadways will ensure long-term connectivity in the region and a state-funded network will hopefully increase sustainability of the network, once complete.

While we are optimistic that this funding can provide much needed infrastructure throughout California, if routes must be minimized to remain within budget constraints, the Yurok Tribe urges the Commission to prioritize unserved rural and tribal areas and regions, such as the Yurok Reservation and Yurok Ancestral Lands.

**1(b) Are there existing middle mile routes that are open access, with sufficient capacity, and at affordable rates on the county highway routes listed in Attachment A?**

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<sup>3</sup> <https://www.gov.ca.gov/2021/07/20/governor-newsom-signs-historic-broadband-legislation-to-help-bridge-digital-divide/>

At this time, the Yurok Tribe is unaware of any middle-mile routes that are open access and at affordable rates within its Ancestral Lands or Del Norte and Humboldt counties.

**1(c) In the context of these comments, what is sufficient capacity and affordable rates?**

The Yurok Tribe proposes the state implement the following rates and speeds:

1. For direct to consumer pricing
  - a. Less than \$25.00 monthly for 25/3 Mbps
  - b. Less than \$50.00 for 100/25 Mbps
  - c. Consumer pricing for tribal government offices/accounts
2. For resale/wholesale pricing to tribes and tribal WISPS
  - a. Wholesale bandwidth for less than \$1 per megabit per month, which should incorporate any fees (i.e. price per hop, etc.)
  - b. Wholesale bandwidth to a tribal WISP serving individuals within a low-income census block, less than \$100 per gigabit per month.

Ultimately, if California would like to have affordable broadband for all, California must set a pricing structure that would be accommodate all consumers. The Commission should thus consider a separate, more affordable pricing structure for tribes. Whatever a tribe, tribal utility, or tribal business telecom has to pay per megabit, those costs (or savings) transfer to the consumer in addition to costs for operational expenses, maintenance, and capital expenditures (where applicable). If Tribes and tribal WISPS, such as the Yurok Tribe and Yurok Connect, are able to get bandwidth at a more reasonable cost, that will result in more affordable service to customers.

Pre-covid, some smaller tribal WISPS, like Yurok Connect, may have been able keep prices low by stretching capacity—because a single user or consumer household was not utilizing the bandwidth to the full capacity. That is no longer the case, most residential users are now working from home, children are attending classes remotely, and safe entertainment and socialization options all happen online—demand has grown exponentially, the cost of living continues to rise, and consumers in our region cannot afford to pay higher rates for internet access.

In addition to the comments received in this proceeding, the Yurok Tribe recommends the Commission conduct an ongoing or follow-up analysis of pricing structures to allow for more specific input that reflects the context that will exist once the infrastructure is complete.

**1(d) For routes that are identified as being open access, with sufficient capacity, and at affordable rates, how should the Commission verify these claims (e.g., should Communications Division send a data request for service term sheets, rates, approximate dark fiber, lit fiber, and conduit capacity, etc.)? Are there any other criteria that should be used to verify these claims?**

In addition to the methods described in question 1(d), the Commission should conduct outreach to the local tribal Government, tribal WISPs, and pursue community outreach efforts to add more context. The Commission should also evaluate whether sufficient capacity exists by analyzing minimum necessary speeds and population served. The Commission could look into the possibility of creating a consumer incentive program that solicits consumer screenshots of speed tests and bill samples.

### **III. Public Comment Issue 2: Priority Areas**

**2(a) Is it reasonable to assume counties with a disproportionately high number of unserved households (e.g., 50% or more unserved at 100 Mbps download) are areas with insufficient middle-mile network access?**

Yes, this is a reasonable assumption. However, for tribes that do not initially fall within that assumption, the Commission should provide tribe's the opportunity to demonstrate that their rural reservation should be evaluated separately from the surrounding county. Depending on the region, a county could be considered to have sufficient middle mile network access, but a tribe within a remote part of the county could have zero access. Further, the Commission should conduct government-to-government consultation with the Yurok Tribe to verify the Commission's data and receive updated information from the Yurok Tribe, where necessary. We find that available state and federal data often overestimate broadband access and underestimates the number of households on the Yurok Reservation; we may have more information that will be of use to the Commission.

**2(b) What other indicators, if any, should the Commission use to identify priority statewide open-access middle-mile broadband network locations (i.e., built expeditiously, areas with**

**no known middle-mile network access, regions underserved by middle-mile networks, regions without sufficient capacity to meet future middle-mile needs)?**

The Yurok Tribe recommends prioritization of middle-mile routes that will create opportunities for last-mile service in previously overlooked reservations, tribal lands, and ancestral territories. Specifically, the Commission should prioritize the routes listed in Section II of this comment, areas with no known middle-mile network access, and regions underserved by middle-mile networks, which would bring service to the Yurok Reservation and Yurok Ancestral Lands.

**IV. Public Comment Issue 3: Assessing the Affordability of Middle Mile Infrastructure**

**3(a) What are existing providers paying or charging for middle mile services?**

Currently, there is no available middle-mile fiber serving the Yurok Reservation.

**3(b) Are there other factors or sources of information the Commission should consider for determining whether these services are affordable?**

Yes, for reservations and tribal lands, the Commission should consider the unemployment rates, cellular service availability (as lack of service results in more internet use) and income rates of the area.

**3(c) Is it reasonable for the costs of these services to change depending on the location where the service is provided (i.e., rural vs urban)?**

Once infrastructure is built, rural areas should not be subject to higher prices, particularly low-income rural areas. Further, rural Reservations and tribal lands should receive the lowest tier pricing possible to allow sustainability of their last-mile service provision in less populated, low-income portions of the state.

**V. Public Comment Issue 4: Leasing Existing Infrastructure**

**4(a) If there is existing open access communications infrastructure with sufficient capacity to meet the state's needs, should the state purchase IRUs from that network?**



At this time, the Yurok Tribe does not have a comment.

**4(b) Is there any value in the state purchasing an IRU from the network if capacity is already available?**

Yes, the state should consider purchasing an IRU, if appropriate capacity is available, as it may expedite the speed of implementation. However, when looking for an IRU to purchase, the state should first consider collaborating with tribes to purchase capacity from a tribe's infrastructure, as this will accomplish the state's middle-mile objectives and provide a revenue stream for tribal governments and tribal WISPs or tribal telecommunication businesses—who are often solely responsible for bringing telecommunication services to their service area.

**4(c) If the state relies on IRUs for the development of the statewide network, will the generational investment that this funding provides be diminished when the IRU leases end 20 to 30 years later? Will existing networks run out of spare capacity?**

If the state relies on IRUs, the Yurok Tribe recommends building into the IRU requirements to scale and increase capacity. Adding incentives like increased monthly maintenance for the IRU and going with a long-term IRU with right of first refusal for re-upping leases, which gives the owner funds to invest in upgrades as needed. The Commission should consider other incentives that will result in sustainability of the state-funded middle-mile network. We also request that when the state purchases an IRU from a private party, they set aside a portion for the tribes to use for fiber routes that are within the tribe's ancestral lands.

**VI. Public Comment Issue 5: Interconnection**

**5(a) At what points should the statewide network interconnect (e.g., to other networks, servers, etc.)?**

Redundancies are key. The Yurok Tribe recommends prioritizing interconnections with tribes and tribal providers. If larger interconnections are being considered, the high-speed cable landing in Eureka should be considered. When connecting to other servers and networks, it's essential to prioritize security and data sovereignty. Tribes should be made aware of any security concerns or risks when the state is connecting fiber to a potential security hazard.

**5(b) Are additional exchange points necessary or strategic, and if so, where?**

Exchange points are both necessary and strategic, as redundancies are key. The Yurok Tribe highly recommends meet-me locations near population centers on reservations and within rural areas. We recommend the prioritization of meet-me locations at Klamath, CA, Weitchpec, CA, and Orick, CA. The security of meet-me rooms (huts or sheds) are critical, so we request that early conversations happen with the Yurok Tribe as to the construction and security of any meet-me rooms within the Yurok Ancestral Lands. The state should consider compensation for the security, power, and maintenance of these meet-me sites on tribal lands.

**VII. Public Comment Issue 6: Network Route Capacity**

**6(a) How many strands of fiber should the network deploy for each route?**

For the proposed routes (and Yurok Tribe's proposed additional routes) within Humboldt and Del Norte counties, we recommend at least 144 strands.

**6(b) Are there other requirements or standards the Commission needs to consider to determine sufficient capacity?**

One connection and one route are not sufficient. There should be at least two options for each in the event of outage, break, or natural disaster.

**6(c) Should the network also deploy additional conduit within each route for potential future expansion?**

Yes, future-proofing is incredibly important and additional conduit should be placed within each route.

**6(d) Should these factors change based on the population density and distance from the core network?**

The Yurok Tribe recommends maintaining a limited base count as previously proposed in these comments. The base count should not decrease based on population density and distance from core network, particularly for routes to, through, or adjacent to reservations or tribal lands.

However, the Commission could increase the count in more populated areas. Strand count can be managed through proper network design.

### **VIII. General Comments**

The Yurok Tribe provides the following general comments in response to other general issues identified in the Scoping Memo. The Commission has generally been tasked with taking public comment,

*“on the design, technical, business, and operational considerations that would increase the attractiveness and usefulness of the statewide open-access middle-mile broadband network for commercial internet service providers.”<sup>4</sup>*

We strongly recommend that infrastructure construction within the Yurok Ancestral Lands and Yurok Reservation comply with the Yurok Tribe’s regulations and permitting, particularly environmental and cultural regulations. We agree that speedy implementation and construction is necessary, particularly in rural areas without fiber access, such as the Yurok Reservation. However, invaluable cultural and natural resources should not be sacrificed. The Commission should require government-to-government consultation with the Yurok Tribe on any projects that may impact the Tribe’s cultural resources. As part of this consultation, the Yurok Tribe requests the Commission seek input from the Yurok Tribe as early as possible so the Commission can comply with the necessary Tribal regulations and permitting and the Yurok Tribe may lend its subject matter expertise to ensure a successful build that does not harm cultural and natural resources.

The Yurok Tribe has recently successfully completed massive and properly permitted infrastructure projects on very short timelines while avoiding any negative impacts; thanks to early collaboration with our Tribal Historic Preservation Officer and cultural monitors as well as our in-house environmental monitors. The Yurok Tribe stands ready to assist with an ethical implementation of the states middle-mile fiber network and urges the state to respect tribal sovereignty and work with us to reach our mutually beneficial goal of broadband on the Yurok Reservation.

Finally, the construction of this network presents job opportunities that are desperately needed in our rural region, where tribal members that wish to live within their ancestral

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<sup>4</sup> Page 2 of August 6, 2021 Scoping Memo.

homelands often must settle for more limited economic opportunities. We urge the Commission to work with the Yurok Tribe's Tribal Employment Rights Office and the Yurok Tribe's Construction Corporation, so Yurok tribal members and community residents can contribute their skills and unique understanding of the region to create the middle-mile network.

## **IX. Conclusion**

The Yurok Tribe appreciates consideration of these comments.

Respectfully submitted at Arden, California,

/s/ Kori Cordero

Kori Cordero

Associate General Counsel

Yurok Tribe

PO Box 1027

Klamath, CA 95548

Tel: (707) 482-1350

E-mail: [kcordero@yuroktribe.nsn.us](mailto:kcordero@yuroktribe.nsn.us)

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